



## **Installation of Apache OpenMeetings 6.0.0 on CentOS 7**

This tutorial is made based on fresh installations of

**CentOS-7-x86\_64-Minimal-1708.iso**

My sincere thanks to Maxim Solodovnik for his help, without which i could not have finished this tutorial satisfactorily.

It is made step by step.

Starting...

1)

We access to terminal as root::

`su`

....will ask for root password.

Install nano editor:

```
yum install -y nano
```

Add our user system to sudoers, so can use sudo:

```
nano /etc/sudoers
```

...copy and paste replacing **user** by your real user system name:

```
user ALL=(ALL:ALL) ALL
```

...press in the keyboard **Ctrl+x**, will ask to save, press **Y**, and press **Enter** to exit nano editor.

Now will change the selinux configuration, enforcing to permissive:

```
nano /etc/selinux/config
```

...modify:

```
SELINUX=enforcing
```

...to

```
SELINUX=permissive
```

...press in the keyboard **Ctrl+x**, will ask to save, press **Y**, and press **Enter** to exit nano editor.

Update the system:

```
yum update -y
```

...and reboot the machine to get effect the changes. After reboot please continue at step 2:

```
reboot
```

2)

----- ADD Repos -----

```
sudo yum install -y wget
```

**EPEL:**

```
sudo wget https://dl.fedoraproject.org/pub/epel/epel-release-latest-7.noarch.rpm
```

```
sudo rpm -Uvh epel-release-latest-7*.rpm
```

## Nux ##

(Only one line without space between both)

```
sudo rpm -Uvh http://li.nux.ro/download/nux/dextop/el7/x86_64/nux-dextop-release-0-5.el7.nux.noarch.rpm
```

3)

----- Installation of Java -----

Java 11 is necessary for OpenMeetings 6.0.0. So we install OpenJava 11:

```
sudo yum install -y java-11-openjdk-devel
```

Maybe you have installed various versions of Java. Please select the just installed OpenJava 11:

```
sudo update-alternatives --config java
```

And to see if the selected version is active:

```
java -version
```

4)

----- Installation of LibreOffice -----

OpenMeetings will need LibreOffice to convert to pdf the uploaded office files. Install it.

Maybe it is installed, but for iso server:

```
sudo yum -y install libreoffice libreoffice-headless
```

5)

----- Installation of Ghostscript, necessary packages and libraries -----

Will install packages and libraries we'll need later:

(All in only one line, with space between each one of them)

```
sudo yum install -y libjpeg libjpeg-devel freetype freetype-devel unzip gcc gcc-c++ ncurses ncurses-devel make zlib zlib-devel libtool bison bison-devel openssl-devel bzip2 bzip2-devel file-roller git autoconf automake pkgconfig tomcat-native nmap vlc
```

We access terminal as root:

```
su
```

...will ask for root password.

With a script we should compile Ghostscript 9.52:

```
cd /opt
```

```
wget https://cwiki.apache.org/confluence/download/attachments/27838216/ghostscript.sh
```

```
chmod +x ghostscript.sh
```

...and run it:

```
./ghostscript.sh
```

...when be finished will announce it: **GhostScript compilation is Finished!**

```
rm -Rf /opt/ghostscript-9.52
```

6)

#### ----- Installation ImageMagick and Sox -----

**ImageMagick**, work the images files jpg, png, gif, etc. We install it and some libraries:

```
yum install -y ImageMagick giflib giflib-devel giflib-utils
```

**Sox**, work the sound. Will compile it:

```
wget http://ftp.icm.edu.pl/packages/sox/14.4.2/sox-14.4.2.tar.gz
```

```
tar xzvf sox-14.4.2.tar.gz
```

```
cd /opt/sox-14.4.2
```

```
./configure
```

```
make && make install
```

```
cd /opt
```

7)

----- **Compilation of FFmpeg** -----

FFmpeg work with video. Will install a paquets, libraries and vlc to play the recordings:

(Only one line without space between each one ofthem)

```
yum install -y glibc alsa-lib-devel faac faac-devel faad2 faad2-devel gsm gsm-devel imlib2  
imlib2-devel lame-devel vorbis-tools theora-tools libvpx-devel vlc autoconf automake cmake  
freetype-devel gcc gcc-c++ git libtool make mercurial pkgconfig zlib-devel curl
```

This ffmpeg compilation is based on this url:

<https://trac.ffmpeg.org/wiki/CompilationGuide/Centos>

I made a script to compile and install ffmpeg on CentOS. It is tested and is ok.  
The result of any recording we do in OpenMeetings will be in mp4 format.

When is finished, will appear a text:

**FFmpeg Compilation is Finished!**

So, we download the script:

```
cd /opt
```

```
wget https://cwiki.apache.org/confluence/download/attachments/27838216/ffmpeg_centos7.sh
```

...concede execution permission to it:

```
chmod +x ffmpeg_centos7.sh
```

...and run it. The compilation will spend about 30 minutes:

```
./ffmpeg_centos7.sh
```

All the compiled files will be installed in: /usr/local/bin

When finish, please continue in the next step.

8)

## ----- Installation of MariaDB data base server -----

Exit as root:

`exit`

MariaDB is the data base server. We install it:

`sudo yum install -y mariadb-server`

...and run mariadb:

`sudo systemctl start mariadb.service`Give a password to mariadb root . Please, modify `new-password` by your own.`sudo mysqladmin -u root password new-password`

Make a database for OpenMeetings. User password must be of 8 digits minimum:

`sudo mysql -u root -p`

...will ask for the root password you does just now:

MariaDB [(none)]> `CREATE DATABASE open600 DEFAULT CHARACTER SET 'utf8';`

Now we create a user with all permission on this open600 database.

(Only one line with space between both)

MariaDB [(none)]> `GRANT ALL PRIVILEGES ON open600.* TO 'hola'@'localhost' IDENTIFIED BY '1a2B3c4D' WITH GRANT OPTION;`

- \* `open600` ..... name of the database
- \* `hola` ..... user for that database
- \* `1a2B3c4D` ..... password of that user

You can change the data...but remember it! Later we'll need it. Now we exit MariaDB:

MariaDB [(none)]> `quit`

9)

## ----- Installation of OpenMeetings -----

We'll install OpenMeetings in /opt/open600. All the following information will be based on this directory:

```
cd /opt
```

...download the OpenMeetings file:

```
sudo wget https://archive.apache.org/dist/openmeetings/6.0.0/bin/apache-openmeetings-6.0.0.tar.gz
```

...uncompress it:

```
sudo tar xzvf apache-openmeetings-6.0.0.tar.gz
```

...and rename the obtained folder:

```
sudo mv apache-openmeetings-6.0.0 open600
```

Download and install the connector between OpenMeetings and MariaDB:

```
cd /opt
```

(Only one line without space between both)

```
sudo wget https://repo1.maven.org/maven2/mysql/mysql-connector-java/8.0.22/mysql-connector-java-8.0.22.jar
```

...and copy it to where must be:

```
sudo cp /opt/mysql-connector-java-8.0.22.jar /opt/open600/webapps/openmeetings/WEB-INF/lib
```

**10)**

**----- Script to launch Tomcat-OpenMeetings -----**

We'll download the script to run tomcat-OpenMeetings:

```
cd /opt
```

```
sudo wget https://cwiki.apache.org/confluence/download/attachments/27838216/tomcat3
```

...copy it to where must be:

```
sudo cp tomcat3 /etc/init.d/
```

...concede execution permission:

```
sudo chmod +x /etc/init.d/tomcat3
```

If you made the installation in any other path to /opt/open600, please edit the script and modify the line:

```
CATALINA_HOME==/opt/open600
```

...to

```
CATALINA_HOME==/your-path-installation
```

11)

### ----- Run Tomcat-OpenMeetings -----

Restart MariaDB:

```
sudo systemctl restart mariadb.service
```

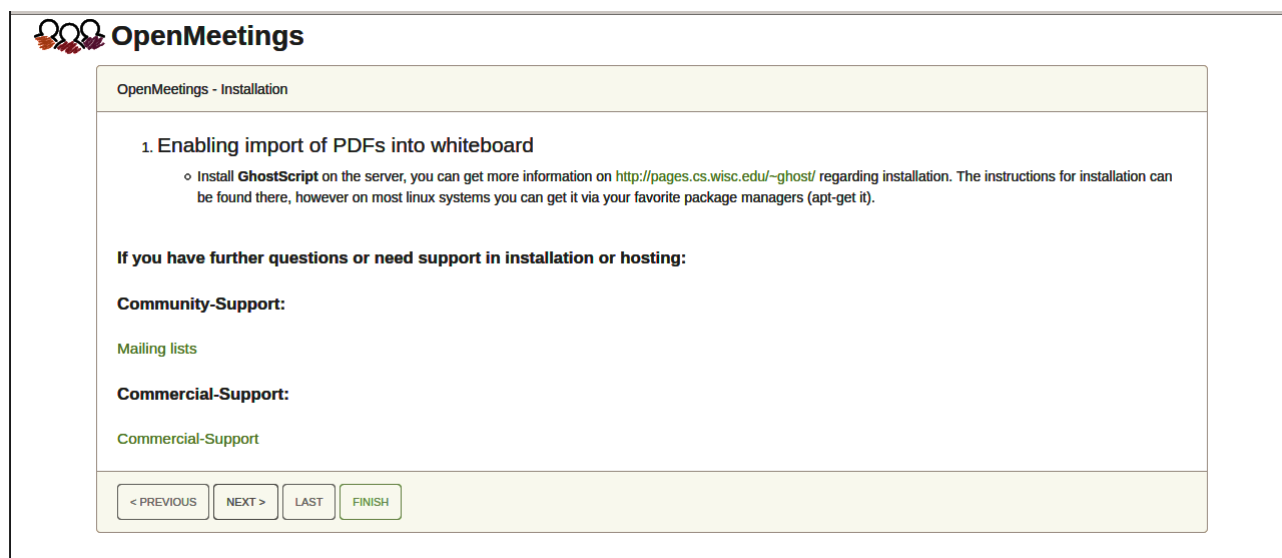
...and run tomcat-OpenMeetings:

```
sudo /etc/init.d/tomcat3 start
```

...wait a minimum of 40 seconds in order tomcat run completely. Then, go with your browser to:

<https://localhost:5443/openmeetings/>

...there will appear a page similar to this one:



**OpenMeetings**

OpenMeetings - Installation

1. Enabling import of PDFs into whiteboard

- Install **GhostScript** on the server, you can get more information on <http://pages.cs.wisc.edu/~ghost/> regarding installation. The instructions for installation can be found there, however on most linux systems you can get it via your favorite package managers (apt-get it).

**If you have further questions or need support in installation or hosting:**

**Community-Support:**

[Mailing lists](#)

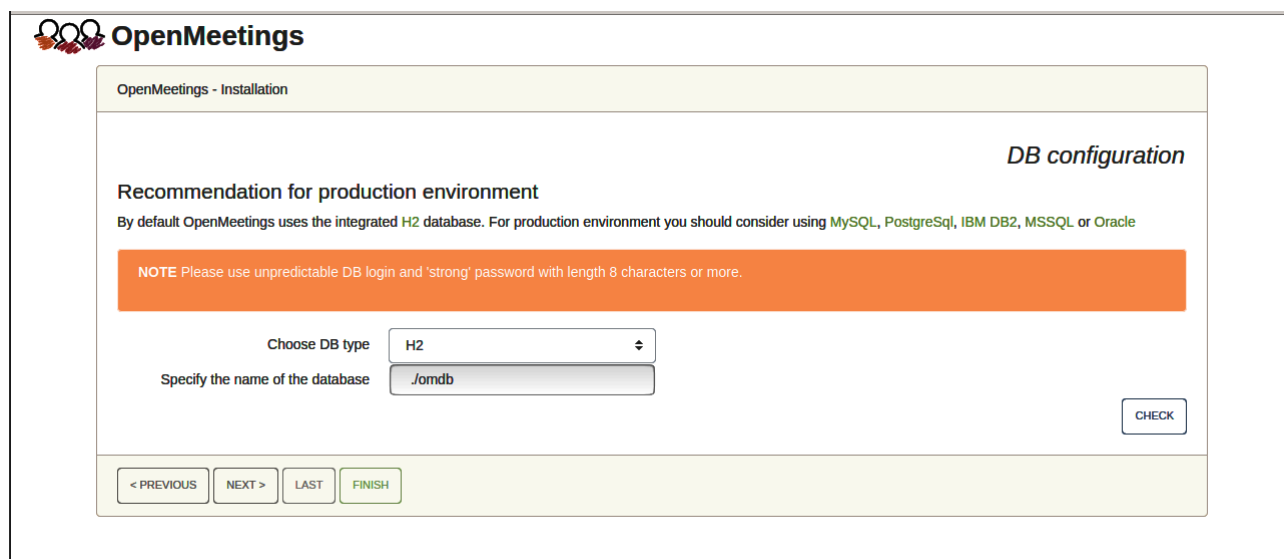
**Commercial-Support:**

[Commercial-Support](#)

< PREVIOUS    NEXT >    LAST    FINISH



...push on “Next >” (bottom), and will show the default database configuration with H2, but we employ MySQL (MariaDB):



**OpenMeetings**

OpenMeetings - Installation

*DB configuration*

**Recommendation for production environment**

By default OpenMeetings uses the integrated H2 database. For production environment you should consider using MySQL, PostgreSQL, IBM DB2, MSSQL or Oracle

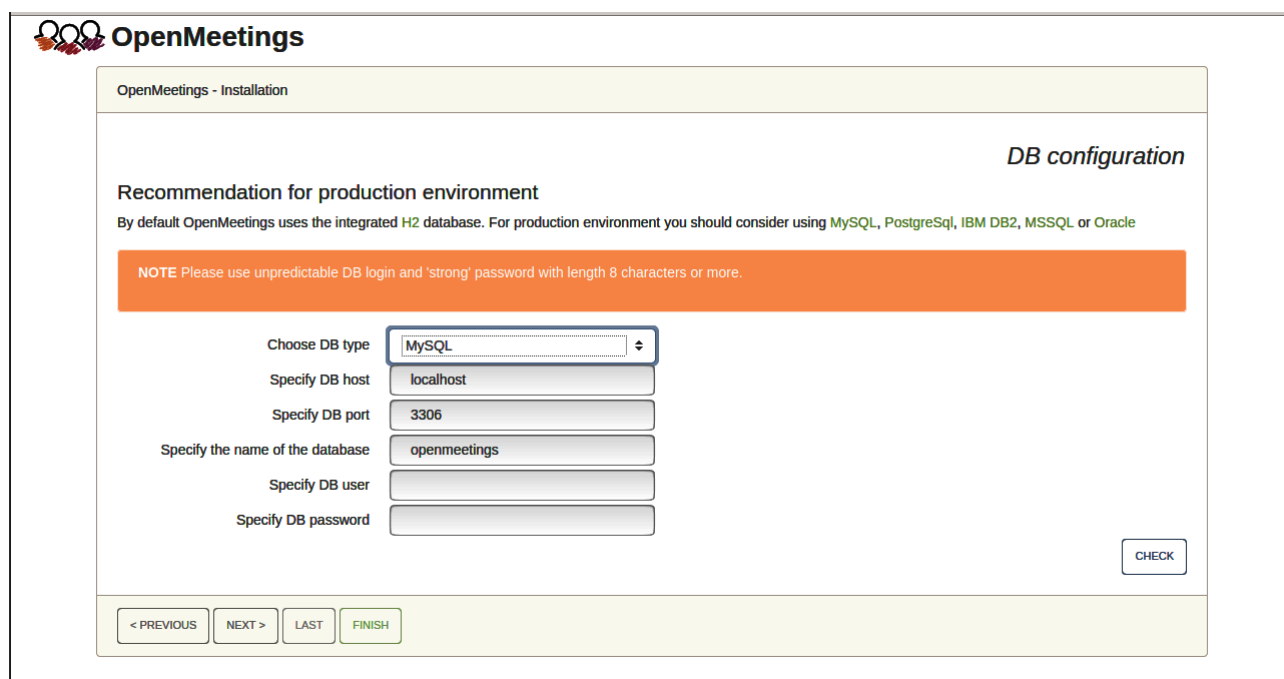
**NOTE** Please use unpredictable DB login and 'strong' password with length 8 characters or more.

Choose DB type:

Specify the name of the database:

< PREVIOUS    NEXT >    LAST    FINISH

...so, scroll and “Choose DB type” to MySQL:



**OpenMeetings**

OpenMeetings - Installation

*DB configuration*

**Recommendation for production environment**

By default OpenMeetings uses the integrated H2 database. For production environment you should consider using MySQL, PostgreSQL, IBM DB2, MSSQL or Oracle

**NOTE** Please use unpredictable DB login and 'strong' password with length 8 characters or more.

Choose DB type:

Specify DB host:

Specify DB port:

Specify the name of the database:

Specify DB user:

Specify DB password:

< PREVIOUS    NEXT >    LAST    FINISH

Here we must introduce the database name, user name and his password we did at the step 8:

**Specify the name of the database** = [open600](#)

**Specify DB user** = [hola](#)

**Specify DB password** = [1a2B3c4D](#)

Please, press “Next >” button and will go to:

Here, we must introduce a user name for OpenMeetings, and his password. This must have 8 digits minimum, and at least 1 special symbol like: + ( % # ! ...etc.

**Username** = [a-name](#) ...this user will be administrator.

**Userpass** = [a-password](#) ...for the previous user

**Email** = [email-adress](#) ...of the previous user.

**User Time Zone** = [country where is this server](#)

**Name** = [example-openmeetings](#) ...group name to choose.

Press the button “Next >” and will lead us to a new page (below) where you can select the language for your OpenMeetings server, as well as other options such as the configuration of the mail server being used to send invitations or meetings from OpenMeetings:

**OpenMeetings**

OpenMeetings - Installation

*Configuration*

Allow self-registering

Send Email to new registered Users

New Users need to verify their EMail

Default DB objects of all types will be created (including Rooms, OAuth2 servers etc.)

Mail-Referer

SMTP-Server

SMTP-Server Port(default SmtP-Server Port is 25)

SMTP-Username

SMTP-Userpass

Enable TLS in Mail Server Auth

Set inviter's email address as ReplyTo in email invitations

Default Language

< PREVIOUS    NEXT >    LAST    FINISH

A valid example to configure the mail server with Gmail, is as follows:

(replace **john@gmail.com** with your real Gmail account)

**Mail-Refer** == [john@gmail.com](mailto:john@gmail.com)

**SMTP-Server** == [smtp.gmail.com](mailto:smtp.gmail.com)

**SMTP-Server Port (default SmtP-Server Port is 25)** == [587](mailto:587)

**SMTP-Username** == [john@gmail.com](mailto:john@gmail.com)

**SMTP-Userpass** == [password of john@gmail.com](mailto:password of john@gmail.com)

**Enable TLS in Mail Server Auth** == [...turn green the button to activate](mailto:...turn green the button to activate)

To select the language of your server OpenMeetings, please scroll on the line:

**Default Language** == [...select your language](mailto:...select your language)

...the rest we can leave as is. If is necessary, can modify it as you like it.

Now press the button “Next >” and a new page will appear:

**OpenMeetings**

OpenMeetings - Installation

*Converters*

Document conversion DPI ⓘ

Document conversion JPEG Quality ⓘ

ImageMagick Path ⓘ  CHECK

FFMPEG Path ⓘ  CHECK

SoX Path ⓘ  CHECK

OpenOffice/LibreOffice Path for jodconverter ⓘ  CHECK

*see also Installation*

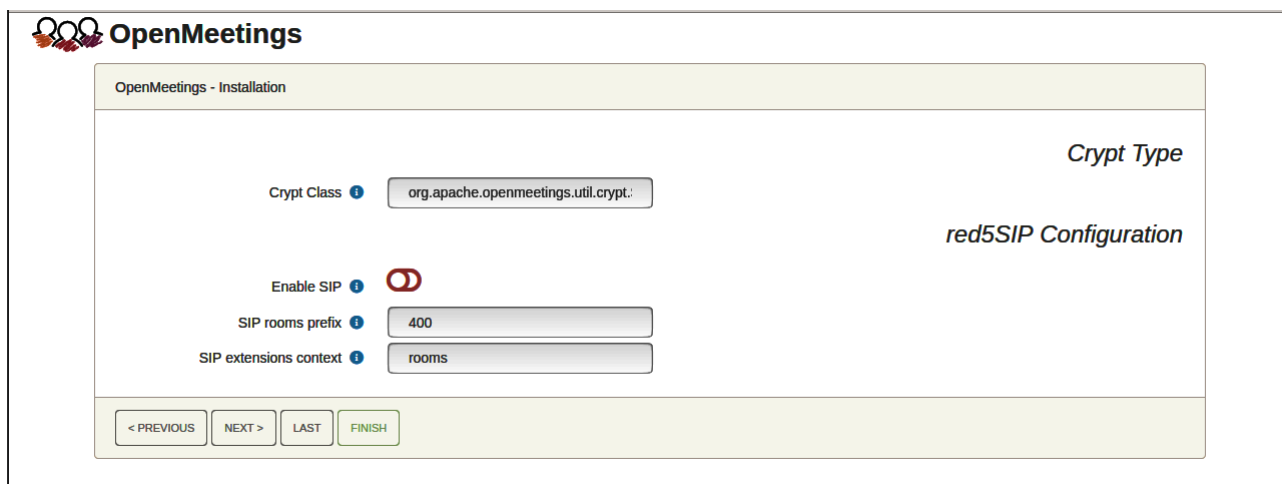
< PREVIOUS    NEXT >    LAST    FINISH

Here we'll introduce the respective paths for the image, video, audio and conversion of uploaded files:

<b>ImageMagick Path</b>	==	...here empty
<b>FFMPEG Path</b>	==	<a href="#">/usr/local/bin</a>
<b>SOX Path</b>	==	<a href="#">/usr/local/bin</a>
<b>OpenOffice/LibreOffice Path for jodconverter</b>	==	<a href="#">/usr/lib64/libreoffice</a>

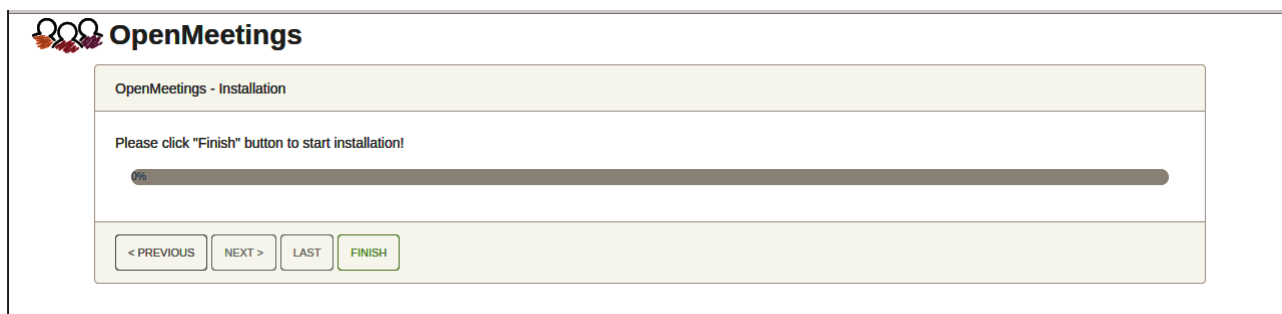
As you go introducing paths, you can check if they are correct by pressing the button labeled **Check**.

Once completed the paths, please click the “Next >” button and move on to another page that we will leave it as is:



The screenshot shows the 'OpenMeetings - Installation' configuration window. It features a header with the OpenMeetings logo and title. Below the header, there are several configuration fields: 'Crypt Class' with the value 'org.apache.openmeetings.util.crypt..', 'Enable SIP' with a checked radio button, 'SIP rooms prefix' with the value '400', and 'SIP extensions context' with the value 'rooms'. On the right side, the text 'Crypt Type' and 'red5SIP Configuration' is displayed. At the bottom, there are four buttons: '< PREVIOUS', 'NEXT >', 'LAST', and 'FINISH'.

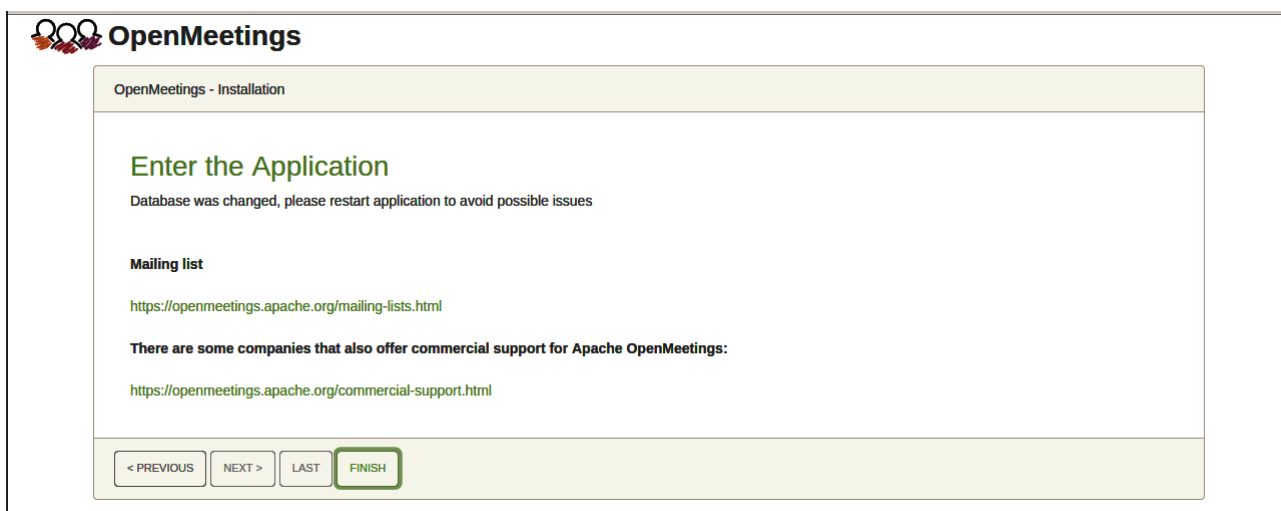
Now push the button “Next >” Will show this window:



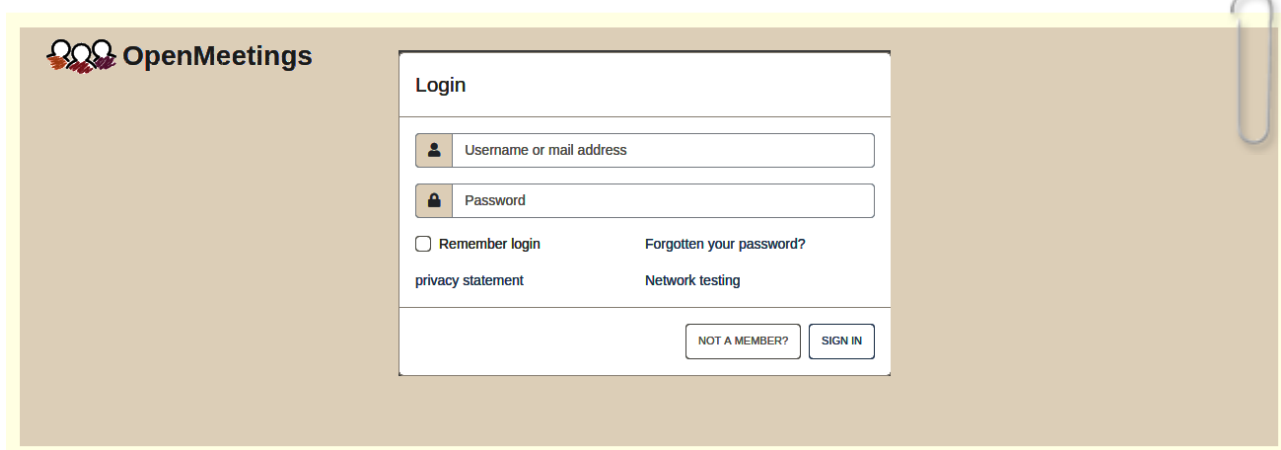
The screenshot shows the 'OpenMeetings - Installation' progress window. It features a header with the OpenMeetings logo and title. Below the header, there is a message: 'Please click "Finish" button to start installation!'. A progress bar is shown below the message, indicating the installation progress. At the bottom, there are four buttons: '< PREVIOUS', 'NEXT >', 'LAST', and 'FINISH'.

Clic “**Finish**” button...wait a seconds untill the tables are fill in the database.  
When has concluded, this another page will appear. **Don't** clic on **Enter the Application**.  
First is need it to restart tomcat server. Be connected to Internet:

```
sudo /etc/init.d/tomcat3 restart
```



Now you can click on **Enter the Application** and it will take you to the OpenMeetings entry. *But wait before entering OpenMeetings, we have to install Docker and Kurento-Media-Server, something we will do in the next steps, so that you can have access to the camera, micro, recording and desktop sharing in the room*



12)

### ----- Installation of Docker -----

First install some necessary libraries:

```
sudo yum install -y yum-utils device-mapper-persistent-data lvm2
```

Add the Docker repo:

```
sudo yum-config-manager --add-repo https://download.docker.com/linux/centos/docker-ce.repo
```

...update:

```
sudo yum update
```

...install docker:

```
sudo yum install docker-ce docker-ce-cli containerd.io
```

Add your user system name to docker group and so can run docker without be root.  
Replace **user** by your real system user name:

```
sudo gpasswd -a user docker
```

...stop tomcat and mariadb:

```
sudo /etc/init.d/tomcat3 stop
```

```
sudo systemctl stop mariadb.service
```

...and reboot the machine. After this, follow in the step 13:

```
sudo reboot
```

13)

#### ----- Installation of Kurento-Media-Server -----

After had rebooted the computer, we'll install Kurento-Media-Server need it for cam, mic-audio, recordings and share dektop in room.

First run docker:

```
sudo systemctl start docker.service
```

...and install kurento-media-server:

(Only one line, with space between 1 and 2, and without space between 2 and 3)

```
sudo docker run -d --name kms -p 8888:8888 --mount  
type=bind,source=/opt/open600/webapps/openmeetings/data,target=/opt/open600/webapps/  
openmeetings/data kurento/kurento-media-server
```

Run kurento-media-server, wich name its kms:

```
sudo docker start kms
```

...and run also MariaDB and tomcat-OpenMeetings:

```
sudo systemctl start mariadb.service
```

```
sudo /etc/init.d/tomcat3 start
```

...wait around 40 seconds to tomcat run completly.

Now you can access OpenMeetings.

Clic the link down and type the user name and his password to login:

<https://localhost:5443/openmeetings>

To connect to this server from Internet or LAN is necessary open these ports:

**5443 8888**

# After installing OpenMeetings, you still need to install Coturn (Turn server), for which you can download the following tutorial and follow it from step 5:

[Installation SSL certificates and Coturn for OpenMeetings 6.0.0 on CentOS 7](#)

14)

----- OpenMeetings's configuration -----

Once you acced to OpenMeetings, if you would like to do any modification in the configuration, please go to:

**Administration → Configuration**



OpenMeetings Contacts and messages | Profile | Logout | Report a bug | About

HOME ▾ ROOMS ▾ RECORDINGS ▾ ADMINISTRATION ▾

Welcome

Hello firstname lastname

Timezone Europe/Berlin

Unread messages 0

[Edit your profile](#)

[UPLOAD NEW IMAGE](#)

**Help and support**

Project website (<https://openmeetings.apache.org>)

User mailing list (<https://openmeetings.apache.org/mailling-lists.html>)

[Network testing](#)

[Check setup](#)

My rooms

My conference room (for 1-16 users) !

Users 0 / 25 ↻

*Click on a room to get the room details*

**Room #**

**Comment**

Users in this room

My presentation room (for 1-120 users) !

Users 0 / 120 ↻

Admin functions

**Admin functions**

Chat

...and following the order of the red arrows:

OpenMeetings Contacts and messages | Profile | Logout | Report a bug | About

HOME ▾ ROOMS ▾ RECORDINGS ▾ ADMINISTRATION ▾

50 « < 1 2 > »

ID	Key	Value
1	crypt.class.name	org.apache.openmeetings.util.crypt.SCryptImplementation
2	allow.frontend.register	true
3	allow.soap.register	true
4	allow.oauth.register	true
5	default.group.id	1
6	mail.smtp.server	localhost
7	mail.smtp.port	25
8	mail.smtp.system.email	noreply@openmeetings.apache.org
9	mail.smtp.user	
10	mail.smtp.pass	
11	mail.smtp.starttls.enabled	false
12	mail.smtp.connection.timeout	30000
13	mail.smtp.timeout	30000
14	application.name	OpenMeetings
15	default.lang.id	1
16	document.dpi	150
17	document.quality	90
18	path.imagemagick	
19	path.sox	
20	path.ffmpeg	/usr/local/bin
21	path.office	/usr/lib/libreoffice
22	dashboard.rss.feed1	https://mail-archives.apache.org/mod_mbox/openmeetings-user/?format=atom

**Configuration**

Type:

Key:

Value:

Last update:

Updated by:

Comment:

-----

If you have some doubt or question, please raise it in the Apache OpenMeetings forums:

<https://openmeetings.apache.org/mailling-lists.html>



Also you can download if you like, a wallpaper of OpenMeetings for different devices such as:

PC, Mac, Smartphone, iPhone and Tablets. Here is the link to download:

[OpenMeetings Wallpaper Download](#)

A dvd live iso with OpenMeetings 6.0.0 on Ubuntu 18.04 lts, it is at your disposal.

Can find it here:

[Live iso download](#)

Thank you

Alvaro Bustos (PMC and Committer at Apache OpenMeetings).